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**United States Patent** [19]  
**Ogasawara**

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[54] **ELECTRONIC SHOPPING SYSTEM  
INCLUDING CUSTOMER RELOCATION  
RECOGNITION**

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235/472.01; 705/14**

[58] **Field of Search** ..... **235/380, 381,  
235/383, 451, 462.01, 462.45, 462.46, 472.01,  
472.02; 705/10, 14, 16, 1**

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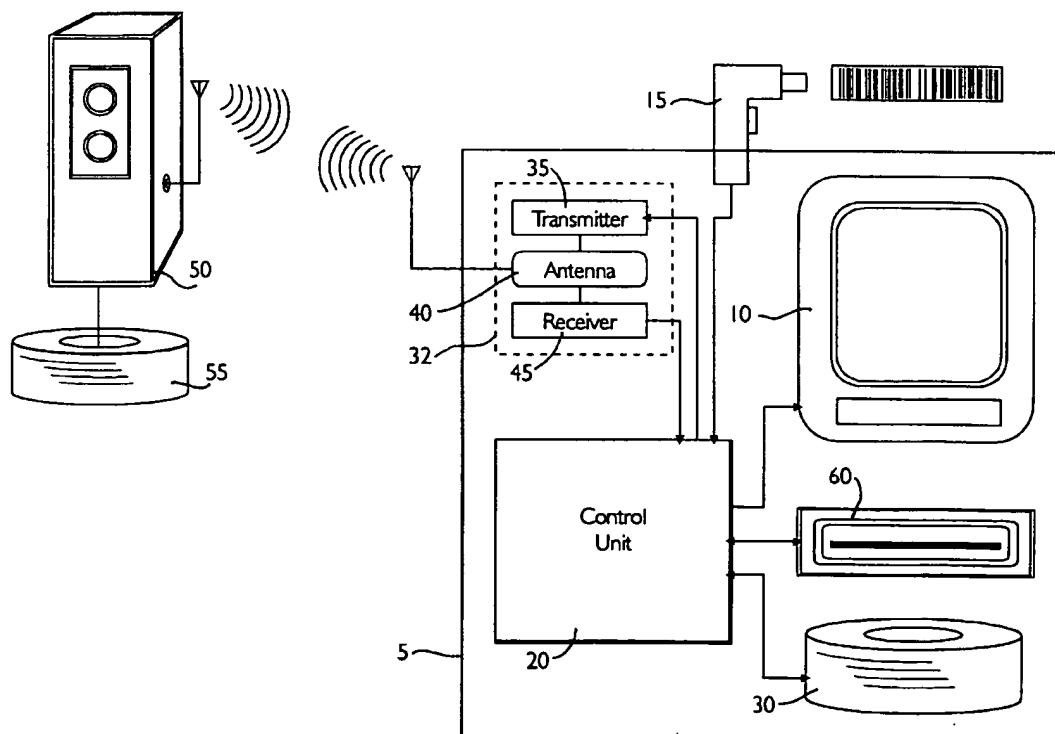
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[57] **ABSTRACT**

An electronic personal shopping system, communicating between a store computer and a mobile terminal, for organizing a consumer's movement through a retail facility in accordance with the consumer's current location and the locations of desired items on either a shopping list or a recommended replenishment item list. The shopping list and recommended replenishment item list are hosted on a customer IC card and read by a mobile shopping terminal. A price look-up table is maintained in a store database and includes location indicia identified to each merchandise item of the store's inventory. As a product is scanned, that item's location indicia is assumed to represent a customer's current location. A desired destination item is taken from the shopping list or the recommended replenishment item list and a distance and direction metric is calculated based on the customer's current location. The system includes a processor capable of developing a recommended replenishment item list from a series of shopping history data records also hosted on the IC card. Each shopping trip results in preparation of a most recent shopping history data record.

**51 Claims, 8 Drawing Sheets**



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TITLE: Electronic shopping system including customer relocation recognition

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DEPR:

Pertinent to transferring a customer's shopping list to either the store's core server or to a customer's mobile terminal is that the electronic shopping system according to the invention includes means to identify each terminal to the core server so that each individual customer's transactions can be maintained separately. In particular, each terminal is assigned a **unique terminal ID** and all communications between that terminal and the store's core server are identified by that **unique terminal ID**. Alternatively, each customer is issued a **unique customer ID** which may be used by the mobile terminal as a **unique identification** flag such that transmissions between a mobile terminal and the store's core server can be allocated to a particular customer. If the mobile terminal communicates with a core server by using the terminal's ID the terminal will necessarily provide the customer's ID information to the core server so that transactions made by that terminal are allocated to that customer.

CLPV:

a first field for holding digital data defining a **unique customer ID**; and